BOSTER BIOLOGICAL TECHNOLOGY
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Anti-NQO1 Antibody Picoband®

Catalog Number: PB9497

About NQO1

This gene is a member of the NAD (P)H dehydrogenase (quinone) family and encodes a cytoplasmic 2-electron reductase. And this FAD-binding protein forms homodimers and reduces quinones to hydroquinones. In addition, this protein's enzymatic activity prevents the one electron reduction of quinones that results in the production of radical species. Mutations in this gene have been associated with tardive dyskinesia (TD), an increased risk of hematotoxicity after exposure to benzene, and susceptibility to various forms of cancer. Altered expression of this protein has been seen in many tumors and is also associated with Alzheimer's disease (AD). Alternate transcriptional splice variants, encoding different isoforms, have been characterized.

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Overview

Product Name	Anti-NQO1 Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-NQO1 Antibody Picoband® catalog # PB9497. Tested in WB applications. This antibody reacts with Human, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
Storage Instructions	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P15559

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Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human NQO1, different from the related mouse and rat sequences by five amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Rat

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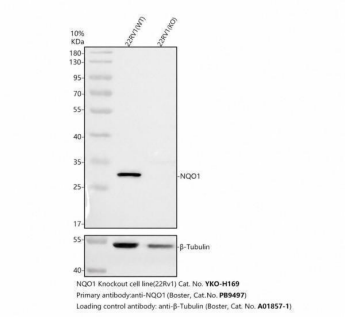
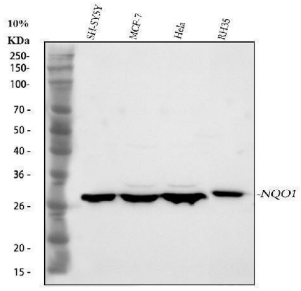
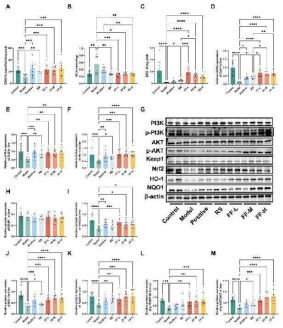
Anti-NQO1 Antibody Picoband® (PB9497) Images



Western blot analysis of NQO1 using anti-NQO1 antibody (PB9497). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human 22Rv1-WT whole cell lysates, Lane 2: human 22Rv1-NQO1 KO whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NQO1 antigen affinity purified polyclonal antibody (PB9497) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for NQO1 at approximately 31 kDa. The expected band size for NQO1 is at 31 kDa.



Western blot analysis of NQO1 using anti-NQO1 antibody (PB9497). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human Hela whole cell lysates, Lane 4: rat RH35 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NQO1 antigen affinity purified polyclonal antibody (Catalog # PB9497) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for NQO1 at approximately 31 kDa. The expected band size for NQO1 is at 31 kDa.



RSBQD activated PI3K/AKT/Nrf2 signaling pathway in exercise fatigued mice (n = 10). A Hepatic GSH-Px activity. B Hepatic SOD activity. C Hepatic MDA content. D – F The relative mRNA levels of Sod1 (D), Nrf2 (E), and Ho-1 (F). G Representative images of Western blot. H – K Relative protein levels of KEAP1 (H), NRF2 (I), HO-1 (J), and NQO1 (K). (L , M) The ratio of p-PI3K/PI3K L and p-AKT/AKT M . * P < 0.05, ** P < 0.01, *** P < 0.001, **** P < 0.0001Index in PubMed under a CC BY license. PMID: 39501343

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